# Who are community health workers and what do they do? development of an empirically-derived reporting taxonomy

Taylor, Rebecca; Parry, Jayne; Mathers, Jonathan

*DOI:*
10.1093/pubmed/fdx033

*Document Version*
Peer reviewed version

*Citation for published version (Harvard):*
Taylor, R, Parry, J & Mathers, J 2017, 'Who are community health workers and what do they do? development of an empirically-derived reporting taxonomy', *Journal of Public Health*. https://doi.org/10.1093/pubmed/fdx033

OXFORD UNIVERSITY PRESS | Journal of Public Health

http://mc.manuscriptcentral.com/jph

# WHO ARE COMMUNITY HEALTH WORKERS AND WHAT DO THEY DO? DEVELOPMENT OF AN EMPIRICALLY-DERIVED REPORTING TAXONOMY



| | |
|---|---|
| Journal: | *Journal of Public Health* |
| Manuscript ID | JPH-16-0428.R2 |
| Manuscript Type: | Original Article |
| Date Submitted by the Author: | 01-Mar-2017 |
| Complete List of Authors: | Taylor, Beck; University of Birmingham, Institute of Applied Health Research<br>Mathers, Jonathan; University of Birmingham, Institute of Applied Health Research<br>Parry, Jayne; University of Birmingham, Institute of Applied Health Research |
| Keywords: | Health promotion, Health services, Socioeconomics factors |
| | |

# WHO ARE COMMUNITY HEALTH WORKERS AND WHAT DO THEY DO? DEVELOPMENT OF AN EMPIRICALLY-DERIVED REPORTING TAXONOMY

**Beck Taylor**

**Post-doctoral Clinical Research Fellow**

**Jonathan Mathers**

**Senior Lecturer**

**Jayne Parry**

**Professor**

**All Authors:** **Institute of Applied Health Research**
**University of Birmingham**
**Edgbaston**
**Birmingham**
**England, UK**
**B15 2TT**

**Corresponding Author:** **Jayne Parry**
**J.M.Parry.1@bham.ac.uk**
**+44 (0)121 414 3191**

**ABSTRACT**

**OBJECTIVES:**

To develop an empirically-informed reporting taxonomy for Community Health Worker (CHW) services to address concerns about the transparency and consistency of descriptions of these interventions in the existing literature

**METHODS:**

We undertook in-depth interviews (n=43) with CHWs and service staff working in four case studies selected using maximum variation sampling. Interviewees were encouraged to talk about the service, how they had become involved with the service, the CHW role and relationship with clients.

**RESULTS:**

Thematic analysis identified recurrent cross-case observations which we classed as 'who CHW are' and 'what CHW do'. CHW's personal characteristics comprised the sub-groups Knowledge & Skills, Personal Qualities, Similarity to Client, and Voluntary/Paid Status; Role characteristics comprised Time & Continuity, Settings, limited Responsibility, Core Task, and Enacted Philosophies.

**CONCLUSIONS:**

We have developed a conceptual framework for reporting CHW interventions based on the existing literature and our own empirical work. Compared with existing work in the field, the taxonomy uses nomenclature that minimises current overlap and confusion, and provides a more complete description of CHW characteristics.

**INTRODUCTION**

Community Health Workers (CHWs) are a growing component of the health service workforces in high income countries [1]. Despite this, our understanding of the mechanism by which CHWs may act as agents of population health improvement remains limited [2]. This understanding is important to enable us to harness the 'active ingredients' of CHW programmes, and effectively design, implement, and evaluate CHW services across different client groups and settings [3].

Part of the problem in conceptualising how and why health gain may be achieved comes from the limited articulation by authors of the nature of the interventions they are developing, implementing and evaluating [1,4-7]. This is compounded by the wide range of terms used to describe CHW-type approaches (see Box 1), a challenge acknowledged by others [1,8]. In this paper we explore the concept of the CHW in its broadest sense, incorporating groups such as 'peer supporters' and 'lay workers', as have others publishing in the CHW field [9-11].

The range of nomenclature in the literature reveals overlap in interpretation and usage. Overall, the names used to describe CHWs suggest some central importance for 'who' the workers are. Generally these names indicate a degree of similarity between the worker and client; for example, 'peer', 'lay' and 'community' (Box 1). However these terms have multiple meanings and interpretations. 'Lay' could describe an ordinary person off the street, or someone with additional knowledge or training (e.g. a lay preacher). A community can be geographical, demographic, cultural, etc. A 'peer' might be defined as someone in the immediate social circle, or simply share a characteristic such as being a parent.

To address this confusion, South and colleagues have proposed that a distinction should be made between 'non-professional', 'peer' or 'embedded' workers [12]. In their work, 'non-professional' workers are not "*necessarily*" similar to clients whereas 'peer' workers are matched to clients on the basis of *"'peerness' – age, social status, gender, shared experience etc."* 'Embedded' refers to workers who are *"known and working in their own community; this can include both peers and community leaders."* While South's approach goes some way to providing greater specificity in terms of identifying the key personal characteristics of the CHWs, there is still scope for confusion. For example, are non-professionals sometimes matched to clients; what are the boundaries of 'peerness' and 'community leaders'?

Alongside the difficulties in describing 'who workers are', identifying common, important elements in the work CHWs undertake with clients - their role characteristics - presents similar challenges. The settings, tasks, populations and issues addressed, and approaches to engagement vary widely between CHW services [2]. A number of studies have explored roles but their observations suggest that (as with attempts to describe the characteristics of CHWs as individuals) the terms used to describe roles are difficult to interpret, with overlap between the role characteristics defined, and with inconsistency across studies [4,5,13,14].

**Study Objective**

In this paper, we take the first steps towards understanding the mechanism of action by which CHWs may bring about health gain in England by developing a taxonomy for use in describing fully the components of CHW interventions (i.e. *who* CHWs are and *what* they do).

**METHODS**

**In-depth Case Studies of Community Health Worker Services**

The work was approved by South Birmingham ethics committee, reference 10/H1207/74. Case studies were purposively selected to capture a range of CHW models and client populations operating in England. In terms of CHW model, particular areas of interest were; whether workers were paid or volunteers, group and individual interventions, National Health Service (NHS) and non-NHS providers, single (e.g. breastfeeding) and complex (e.g. multiple pregnancy outcomes) issues. With respect to the target population we sought urban and rural/non-urban, deprived and affluent, diverse and homogeneous populations. The summary characteristics of the four case studies selected are presented in Table 1.

**Data Collection**

BT conducted in-depth individual interviews with workers and service managers within the selected services. Up to 10 CHW participants were interviewed in each case study, though in some services fewer were available (see Table 2). All available managers were interviewed in each service, plus a small number of stakeholders in partner organisations. The initial part of each interview was deliberately unstructured in order to allow the interviewee to 'tell their story'. Interviewees were encouraged to talk about the service, how they had become involved with the service, and the CHW role and relationship with clients. Direct questions were avoided until the near end of an interview

and only introduced then if a key point of interest had not been volunteered or addressed. The interviews were conducted between November 2011 and September 2012.

**Analysis of Interviews**

Interviews were audio-recorded and transcribed verbatim for analysis. BT conducted the initial thematic analysis of their content based on the Framework analytic approach [15]. After initial familiarisation, coding, indexing and thematic development proceeded iteratively with on-going discussion among all authors. The analyses presented here focus on our comparative findings across the individual case study services, including recurrent cross-case observations and themes.

**FINDINGS**

The interviews and subsequent analysis revealed two overarching groupings to describe the characteristics of CHWs which were reported to impact on the mechanism of health improvement: who workers are, or 'person characteristics', and what workers do, or the 'role characteristics' of CHWs. These are described below. The taxonomy of CHW characteristics informed by the empirical work is presented in Box 2. Throughout the text characteristics are italicised.

**Who CHWs are: 'person characteristics'**

The person characteristics that emerged from the interview data and which were common across the four case studies comprised four domains*: knowledge and skills, personal qualities, similarity to client*, and *volunteer/paid status*.

*Knowledge and Skills*

*Knowledge* consisted of 'population', 'specialist' and 'service' knowledge. *Population knowledge* encompassed any kind of knowledge about the target groups and communities (people, daily lives, sociocultural norms, values and behaviours). *Specialist knowledge* described knowledge which ordinary members of the public would not be expected to have, e.g. mother and infant behaviour. *Service knowledge* referred to the workers' understanding of local facilities, organisations, staff and other resources. This knowledge could be acquired through CHW membership of particular population, through training or experience in the CHW role. In the following example, a M&T Worker indicates her knowledge about the educational level of her clients.

"A lot of the people we work with possibly left school at 15 and 16, may or may not have qualifications, so the last thing they want is that school type environment."
M&T Worker 1

*Skills* included communication skills, community language skills, and specific skills such as counselling or breastfeeding. Mode of skill acquisition varied; for example Breastfeeding could only be acquired through direct life experience:

"The one common denominator is that they have breastfed. That's all we need."
Peer Supporter Manager 2

*Personal Qualities*

Participants reported CHWs as having a range of what we have defined as '*personal qualities*', which had a positive impact on their ability to support clients. In short, these qualities are what one might consider positive attributes, associated with being a 'nice' or 'good' person. These included: being *empathic, compassionate*, and a *'people person'*. Interviewees also emphasised the importance of workers being *persistent* (*i.e.* not giving up when it is difficult to provide client support) and of being willing to '*go the extra mile'* and to work beyond expectations for their clients. Being non-judgmental was also considered an important personal quality:

"I would never ever get into where my opinions are, and my judgement, or what I think would never ever influence how I deal with my clients...No matter what you think or what you say, you've come to support these people, and if you can't deal with them then you shouldn't be in this job".
POW 5

*Similarity to the Client Group*

Interviewees surfaced the importance of CHW '*similarity to the client group*', and described it in terms of *shared demographics*, *shared experiences* and *shared non-professional status*. *Shared demographic characteristics* (see Box 2) were reported to be associated with the effectiveness of CHW work when shared between worker and client.

"If I went to work in a, say if I went to work in a very, somewhere like [another area], I could do it, it wouldn't be a problem, but because it's predominantly Asian families and we get a lot of people new into the country and extended family issues, I can't relate to that. I can learn and I can try and understand it, but it's not natural to me, so it's, I don't think I'd be as effective, because I can't...I think for me as a person, I prefer...to work somewhere where I can get it."
POW 6

However the interview data suggested the need to differentiate between *shared demographics* and *shared experience*. Demographic groups can be described as having *shared experience*, for example a CHW knows what it is like to live in a deprived area, to be female, black or poor. However interviewees were clear that some experiences are not dependent on current *shared demographics*. For example, where a client is a teenage parent, her CHW might be older than her, but may also have become a mother during her teens. Participants discussed the relevance of their own *experiences* to the impact of the services, with some also reflecting on their '*service experience*' (i.e. having been a client of the service).

"[Because all Slimming World Consultants have been Members] we all know exactly how everybody else feels and we're not perfect Consultants, and not perfect."
Slimming World Consultant 3

"…Being a mum yeah I think it helps a little bit…"
M&T Worker 2

*Volunteer or Paid Workers*

The services adopted a wide range of payment strategies for workers, ranging from no remuneration whatsoever, to regular salaried positions. In particular, volunteer status was reported by some to impact on the support given.

I: "Would being a paid worker make the role different?"
IV: "Yes, it would. Because I'm such a goody two shoes when it comes to work, I want to do a really, really good job and if that meant I had to ensure that someone kept breastfeeding because that was what it was all about then I would maybe feel more pressured to say or not say, 'don't worry if you want to use a formula.' I would try maybe more of an encouragement on that side. Yes, I think it would affect me, actually."
Peer Supporter 3

**What CHWs do: 'role characteristics'**

The data suggests a set of role characteristics common to the four services with regard to working effectively with clients. These were *time and continuity, settings, limited responsibility, core tasks* and *enacted philosophy.*

*Time and Continuity*

Many interviewees related the importance of '*continuity*' of CHW throughout a client's journey; that is the client continues to see the same worker throughout their support relationship.

"She knew I was going every week, I was the only thing that happened regularly in her life."
POW 7

This 'relational' continuity was reported to be distinct from management continuity (where there is a consistent support, but not necessarily from the same person), and informational continuity (where existing client information is available and used to inform care) which also occur in professionalised health services. Linked but separate to the concept of continuity of care was '*time*' where interviewees spoke of the importance to clients of the regularity, duration, flexibility and frequency of contact.

"[Peer Supporters] seem to have more information or perhaps more time I think it is, you know, it's their time whereas they're not you know waiting to go and see someone else."
Peer Supporter 2

*Settings*

Services '*settings*' were described in three ways. *Geographical location* refers to the proximity to the client's own home. Participants also described the *physical venue* as important in terms of the building or environment in which CHW support occurs, including clients' homes, health clinics, out on the street, and in local venues such as church halls.

"Meeting people in a community venue is one thing; that makes us different, perhaps that's where we, that's why the relationship with us is different, because we do go into people's houses and you see...a very different person, because you see, you get a bigger picture."
POW 6

In some of the services, a *group setting* which facilitated support from other clients supplemented the CHW support, e.g. in a Slimming World group meeting.

*Limited Responsibility*

The concept of '*limited responsibility*' captures participants' beliefs that their services focused on relatively discrete aspects of client support compared with traditional healthcare professionals. For example, a midwife has to take care of the clinical assessment and care of patients and infants, along with health promotion, wellbeing, data collection, child protection and other duties. In contrast, a Breastfeeding Peer Supporter only supports breastfeeding, and has no conflicting priorities.

"I think as well that it is just, they are there just for breastfeeding... So I think that they can really just focus on that."
Peer Supporter Manager 1

Limited responsibility was not a binary characteristic, but operated along a spectrum, with some CHWs having broader responsibilities than others. For example, Pregnancy Outreach Workers described a range of responsibilities; to 'help' in any way that would make things better for the pregnant woman, including supporting other members of the family, and practical help to address a range of health issues and social issues (finances, housing, food and clothing, domestic violence etc.), but they still had limited responsibility in that they did not have the clinical or statutory responsibilities of their midwife colleagues.

"I think [midwives have] got a hell of a lot more responsibilities just from a health point of view."
POW 4

*Core Tasks*

Related to the discussions of '*limited responsibility*' emerged a theme describing how services had at their heart an explicit and often unique set of '*core tasks'* which paralleled but were very different from the tasks required from professional healthcare workers. These included but were not limited to activities such as providing information on welfare entitlements, helping source cheap baby clothes, assisting with transport to appointments, assisting with evaluating options, confidence building and so on. We conceptualised this group of core tasks under the banner of social support, although it is important to highlight that participants did not use this term. In all case studies the CHWs were officially sanctioned to devote their time and efforts to providing this 'core task'; it is their job to deliver these explicit activities, rather than it being an 'add on' or extra task as it was often reported to be for professional healthcare staff.

"To emotionally, physically and socially, financially - how can you put that in just one word, because……because the purpose of them is to support and empower."
POW Manager 2

*Enacted Philosophies*

Participants in all case studies identified '*empowerment*' and '*client-focused*' support as key elements of their approaches. These were articulated as explicit concepts underpinning the services.

"Being there, really just to support the members, for them, to empower them to work it out for themselves."
Slimming World Consultant 2

"I think possibly some of the people that we work with, the client groups we work with, not exclusively but some, perhaps possibly have got low self esteem and I think really, it's sort of developing them as a person."
M&T Worker 1

Activities undertaken with the client may be a route to 'enact the philosophy', but the philosophies are the desired 'ends' rather than the 'means'. For example, Breastfeeding Peer Supporters related how a midwife might be more breastfeeding- and problem-focused, rather than a more client-focused approach which explores the context, thoughts and feelings of her client.

"And sometimes it might not even be really talking; it's just listening. It's just about, I think, assessing that mum and finding out ultimately what she wants to get out from that situation. So she comes and she says, 'X, Y, Z,' and you'll say, 'Well, what do you want to achieve?'"
Peer Supporter 5

"And there is, I feel, quite a lot of pressure [on midwives] because they've got targets to meet and all the rest of it, there is pressure that oh, you know, you must breastfeed, you must breastfeed."
Peer Supporter 3

"It wasn't all about breast feeding it was more about me… it didn't feel like going to talk to some…talk to a professional."
Peer Supporter 1, speaking about her previous experience as a client of the service

It is important to highlight that the client-focused philosophy is not necessarily exclusive to CHWs, that professionals may share it, though professionals who share it may not be able to 'enact' it due to lack of time and other constraints.

## DISCUSSION

*Main Findings of this study*

Using data collected across four CHW case studies selected using maximum variation sampling we have constructed empirically-derived descriptions of person ('who CHWs are') and role ('what CHWs do') characteristics. This has enabled us to develop a reporting taxonomy for the detailed description of CHW interventions which addresses the need to bring greater clarity to the literature.

*What is already known on this topic*

Within the literature, descriptions of 'who CHWs are' are often partial or absent, particularly in terms of similarity to the client group [16]. Demographic and social characteristics are often reported, but frequently without the degree of 'matching' with the client group. Loose terms such as 'peer', 'lay' and 'of the community' are used to capture something of the essence of the CHWs, rather than specific detail regarding characteristics which are shared between worker and client, though there are some exceptions, and in particular areas, such as breastfeeding support, shared experiences (e.g. breastfeeding) are explicit.

Knowledge and skills are often described in the context of the training CHWs require to acquire them, though some authors also refer to existing knowledge and skills. As far as skills are concerned, general communication skills such as listening are frequently reported to be relevant, as we found in our own study [13, 17-19]. In addition, skills are often described in terms of the tasks CHWs are required to provide, e.g. 'advocacy skills' [14]. Others have also identified a number of these same characteristics. [20,21].

CHWs are frequently cited as being able to devote more time to their clients compared with traditional healthcare professionals [17, 22, 23]. As in our case studies, others have reported CHW services to be delivered in a variety of settings; convenience, accessibility, familiarity, privacy and safety of service locations have been reported as important. [18].

The provision of social support was the 'core task' identified in our case studies and is one of the key activities associated with CHWs in the literature [19, 24-26]. Indeed, on reading the social support literature we posit that a much wider range of CHW activities described in the literature can be badged as social support. For example, 'system navigation', and interpretation tasks could be

classified as instrumental social support, and health education and information could be classified as informational social support.

A comprehensive literature review conducted alongside our empiric work suggests five other 'core tasks' may be common to international CHW services but which were not evident in our case studies: clinical care, service development, community development, research and activism. CHW models in low income countries are often implemented to address shortcomings in health service provision and as such, they frequently provide clinical care [27]. CHWs do undertake clinical duties in some high income countries, however, most notably in the US. Here, some CHWs provide medication counselling, first aid, and take basic observations such as blood pressure [28]. However the sense from the literature is that these activities are not core tasks for CHWs in England with the focus being more on prevention, health education, and assistance to navigate and access the health system [1,6].

Our research did not uncover examples of how CHWs can contribute to service development and quality, but others have found that they can act as a conduit of information about populations, health needs, and the suitability of other services [29]. Community development activities are integral to many CHW programmes in the literature [21, 25, 32] However South's work in the UK suggested that community development activities were additional, rather than core, common roles, and they were notably absent from our own case studies [11]. This perhaps reflects that the architects of UK services predominantly focus on tangible health problems and health behaviours, rather than the upstream determinants of health which community development approaches might address (for example environment, housing, employment, education) [11].

In some circumstances, CHWs undertake community activist or advocacy roles, championing the rights of particular groups [25, 31, 33]. This is distinct from advocacy for individual clients. This activism can relate to healthcare access, or the broader plight of specific groups. In our own case studies, advocacy was an 'add on', with a few ad hoc examples of advocacy for breastfeeding or vulnerable groups, but this was not a key aspect (or 'core task') of the CHW role. Similarly, advocacy for community needs appears in the US CHW competency framework [8] but these activities are rarely the primary focus of CHWs in the literature where it appears that CHWs engage in activism as a natural response to the structural societal challenges they see in practice rather than as part of their job, *per se*. Finally, we note that one CHW characteristic which appears in the literature but not our own work is 'embeddedness' in the target population, that is workers are

recruited to work within their own social network (e.g. family, workplace) [32]. This form of recruitment was not a feature of any of our case studies.

*What this study adds*

Compared with existing work in the field, the taxonomy uses nomenclature that (we hope) minimises current overlap and confusion, and provides a more complete description of CHW characteristics. It highlights the importance of the multifaceted nature of who workers are and what they do, beyond simple demographic and task-based definitions.

*Limitations of this study*

Rather than attempt a re-interpretation of existing over-arching terms (e.g. lay, peer), this work uses the descriptions provided by CHWs themselves to develop a reporting taxonomy for CHW services. The views of clients were not sought in this project, and we recognise that this is an area where further work is required in order to complement the observations made here, as it is possible that they will diverge from workers' perceptions of themselves, and their practice (34) . The field work was conducted in only one country (England), and while the use of maximum variation sampling attempted to ensure a wide range of services were included, we cannot be certain that all possible service types were present in our study. The mapping of the empiric data to the existing literature suggests our observations are concordant with studies from other high income countries. Potential users of the taxonomy might wish to consider, depending on aims and context for service development, the addition of the 'literature identified' characteristics to those we surfaced empirically in the case studies.

*Conclusion*

Threats to high income countries' public health have changed markedly in recent decades. 'Lifestyle choices' and individual agency are often prioritised as drivers of an increasing chronic disease burden, though there are significant wider structural determinants of health inequality that communities face.(35) Meeting these challenges may require a new and wider public health and healthcare workforce of which CHWs may have a part to play (36). However, they can only be part of the solution, as part of a multilevel societal approach to address the complex determinants of health inequalities. This work reported in this paper is intended to provide a framework to understand and maximise the opportunities and possibilities for health and wellbeing improvement by the CHW workforce. It has the potential to facilitate the design, implementation, evaluation and

communication of CHW service activity. It is a work in progress, and we invite feedback on the structure and content of the taxonomy.

**REFERENCES**

1Kim K, Choi J, Choi E et al. Effects of Community-Based Health Worker Interventions to Improve Chronic Disease Management and Care among Vulnerable populations: A Systematic Review. Am J Public Health 2016; 106 (4): e3-e28

2Arvey SR, Fernandez ME. Identifying the core elements of effective community health worker programs: a research agenda. Am J Public Health. 2012;102(9):1633-7.

3Medical Research Council. Developing and evaluating complex interventions: new guidance. London: 2008.

4Ingram M, Reinschmidt K, Schachter K, Davidson C, Sabo S, De Zapien J, et al. Establishing a Professional Profile of Community Health Workers: Results from a National Study of Roles, Activities and Training. J Community Health. 2012;37(2):529-37.

5Rhodes SD, Foley KL, Zometa CS, Bloom FR. Lay Health Advisor Interventions Among Hispanics/Latinos: A Qualitative Systematic Review. American Journal of Preventive Medicine. 2007;33(5):418-27

6Martinez J, Ro M, Villa NW, Powell W, Knickman JR. Transforming the delivery of care in the post-health reform era: what role will community health workers play? Am J Public Health. 2011;101(12):e1-5.

7Swider SM. Outcome effectiveness of community health workers: an integrative literature review. Public Health Nurs. 2004;19(1):11-20.

8Rosenthal EL, Wiggins N, Ingram M, Mayfield-Johnson S, De Zapien JG. Community Health Workers Then and Now: An Overview of National Studies Aimed at Defining the Field. The Journal of Ambulatory Care Management. 2011;34(3):247-59.

9Lewin SA, Dick J, Pond P, Zwarenstein M, Aja G, van Wyk B, et al. Lay health workers in primary and community health care. Cochrane Database Syst Rev. 2005(1):CD004015.

10Carr S, Lhussier M, Forster N, Geddes L, Deane N, Pennington M, et al. An evidence synthesis of qualitative and quantitative research on component intervention techniques, effectiveness, cost-effectiveness, equity and acceptability of different versions of health-related lifestyle advisor role in improving health. Health Technology Assessment. 2011;15(9)

11South J, Meah A, Bagnall A, Kinsella K, Branney P, White J, et al. People in public health - a study of approaches to develop and support people in public health roles. London: National Institute for Health Research Service Delivery and Organisation, 2010.

12South J, Meah A, Bagnall A-M, Jones R. Dimensions of lay health worker programmes: results of a scoping study and production of a descriptive framework. Global Health Promotion. 2013;20(1):5-15.

13Community Health Worker National Workforce Study. Health Resources and Services Administration, Bureau of Health Professions. (2007). http://bhpr.hrsa.gov/healthworkforce/reports/chwstudy2007.pdf.

14Wiggins N, Borbon A. Core roles and competencies of community health advisors. In: A summary of the National Community Health Advisor Study (Director: E.L. Rosenthal). Mel and Enid Zuckerman College of Public Health; University of Arizona: June 1998. http://crh.arizona.edu/publications/studies-reports/cha

15Ritchie J, Lewis J, McNaughton-Nicholls C, Ormston R. Qualitative Research Practice: A Guide for Social Science Students and Researchers. 2 ed. London: SAGE; 2013.

16O'Brien MJ, Squires AP, Bixby RA, Larson SC. Role Development of Community Health Workers: An Examination of Selection and Training Processes in the Intervention Literature. American Journal of Preventive Medicine. 2009;37(6, Supplement 1):S262-S9.

17Boutin-Foster C, George KS, Samuel T, Fraser-White M, Brown H. Training community health workers to be advocates for health promotion: efforts taken by a community-based organization to reduce health disparities in cardiovascular disease. J Community Health. 2008;33(2):61-8.

18Liu J, Davidson E, Bhopal R, White M, Johnson M, Netto G, et al. Adapting Health Promotion Interventions to Meet the Needs of Ethnic Minority Groups: Mixed-Methods Evidence Synthesis. Southampton (UK): NIHR Journals Library, 2012.

19Dennis C-L. Peer support within a health care context: a concept analysis. International Journal of Nursing Studies. 2003;40(3):321-32

20South J White J, Gamsu M. People-centred Public Health. Bristol: Policy Press; 2013

21Ingram M, Reinschmidt K, Schachter K, Davidson C, Sabo S, De Zapien J, et al. Establishing a Professional Profile of Community Health Workers: Results from a National Study of Roles, Activities and Training. Journal of Community Health. 2012;37(2):529-37

22Lewin S, Munabi BS, Glenton C, Daniels K, Bosch C, X, van-Wyk BE, et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases

23Beake S, McCourt C, Rowan C, Taylor J. Evaluation of the use of health care assistants to support disadvantaged women breastfeeding in the community. Maternal & Child Nutrition. 2005;1(1):32-43.

24South J, Kinsella K, Meah A. Lay perspectives on lay health worker roles, boundaries and participation within three UK community-based health promotion projects. Health Education Research. 2012;27(4):656-70.

25Eng E, Young R. Lay health advisors as community change agents. Family & Community Health. 1992;15(1):24-40.

26Cohen S, Underwood L, Gottlieb B. Social Support Measurement and Intervention. Oxford: Oxford University Press; 2000

27World Health Organisation. Task shifting to tackle health worker shortages. Geneva: World Health Organisation, 2007.

28Health Resources and Services Administration Office of Rural Health Policy. Community Health Workers Evidence Based Models Toolbox. United States Department of Health and Human Services, 2011.

29Friedman AR, Butterfoss FD, Krieger JW, Peterson JW, Dwyer M, Wicklund K, et al. Allies community health workers: Bridging the gap. Health Promot Pract. 2006;7(2 Suppl):96S-107S.

30Hohl S, Thompson B, Krok-Schoen et al. Characterizing Community Health Workers on Research Teams: Results from the Centres of Population Health and Health Disparities. Am J Public Health 2016; 106: 664-670

31Perez LM, Martinez J. Community health workers: social justice and policy advocates for community health and well-being. Am J Public Health. 2008;98(1):11-4

32Eng E, Parker E, Harlan C. Lay Health Advisor Intervention Strategies: A Continuum from Natural Helping to Paraprofessional Helping. Health Education & Behavior. 1997;24(4):413-7.

33Love MB, Gardner K, Legion V. Community Health Workers: Who they are and What they do. Health Education & Behavior. 1997;24(4):510-22.

34 Hamelin AM, Mercier C, Bedard A: Discrepancies in households and other stakeholders viewpoints on the food security experience: a gap to address. Health Educ Res. 2010, 25: 401-412.

35 Sabo S, Ingram M, Reinschmidt KM, Schachter K, Jacobs L, Guernsey de Zapien J, et al. Predictors and a Framework for Fostering Community Advocacy as a Community Health Worker Core Function to Eliminate Health Disparities. American Journal of Public Health. 2013;103(7):e67-e73.

36 Fit for the Future - Public Health People: A review of the public health workforce. Public Health England; May 2016

**Box 1: Terms used to describe CHWs in the literature**

| | | |
|---|---|---|
| Abuelas | Health Aides | Peer dads |
| Allied health personnel | Health education aides | Peer educators |
| Anganwadi workers | Health Education Workers | Peer group leaders |
| Aunties and Uncles | Health Mentor | Peer health advocates |
| Baabas | Health Promotion Volunteers | Peer health coaches |
| Barefoot doctors | Health Support Workers | Peer health educators |
| Befriender Facilitator | Health Trainers | Peer health workers |
| Breastfeeding supporters/peer supporters | Hidden volunteers | Peer informants |
| Bilingual health advocates | Indigenous outreach workers | Peer leaders |
| Birth companion | Indigenous workers | Peer nutrition educators |
| Buddies | Informal leaders | Peer outreach educators |
| Community champion | Informal medical practitioners | Peer outreach workers |
| Community development worker | Inmate peer educator | Peer researchers |
| Community Food Worker | Labour coaches | Peer supporter |
| Community Health Advisor | Lady Health Workers | Peer support volunteer |
| Community Health Advocate | Lay advisors | Peer volunteer |
| Community Health Agent | Lay (breastfeeding) counsellors | Personal coach |
| Community health champion | Lay carers | Popular opinion leaders |
| Community Health Educators | Lay food and health workers | Portera |
| Community Health Outreach Worker | Lay health advisors | Prisoners |
| Community Health Provider | Lay health educators | Professional outreach workers |
| Community Health Representative | Lay health home visitors | Promoter |
| Community Health Support Workers | Lay health leaders | Promotores |
| Community Health Volunteer | Lay health promoters | Public health aides |
| Community Health Worker | Lay health volunteers | Relais |
| Community Mother | Lay Health Workers | Support workers |
| Community lay health leader | Lay helpers | Street outreach worker |
| Community lay health worker | Lay home visitors | Therapeutic assistants |
| Community mentor | Lay navigators | Village family planning volunteers |
| Community nutrition assistants | Lay patient navigator | Village health volunteer |
| Community outreach worker | Lay supporters | Village Health Worker |
| **Community** Reproductive Health Workers | Link workers | Voluntary lay leaders |
| **Community** researchers | Listeners | Volunteers |
| **Community** Support Workers | Local people | Volunteer befriending |
| Conserjeras | Natural helpers | Volunteer educators |
| Doulas | Non-paid community development workers | Voluntary lay leaders |
| Family Health Worker/Advisor | Non-professionals | Volunteer outreach workers |
| Family outreach worker | Outreach workers | Volunteer peer health educators |
| Family support centre workers | Paid community development workers | Volunteer workers |
| Family Support Workers | Paraeducators | Vocational Education and Training workers |
| Female health workers | Paraprofessionals | Voluntary Trained Community Health Activist |
| Grandmothers | Patient Navigators | Young latino promotoro |
| Group counsellors | Peer coach | Youth peer educators |
| Health advisors | Peer counsellor | |

**Table 1: Description of Case Studies**

| | Staff | Client group | Venue | Nature of support |
|---|---|---|---|---|
| **Pregnancy Outreach Worker (POW) Service** | Salaried staff with 'community experience' | Pregnant women at high social risk Predominantly referred by health professionals. | Flexible: homes, health and social care settings, community settings | 1:1 support until 8 weeks post-birth, tailored to client, includes benefits advice, lifestyle support, liaising with professional, providing transport |
| **Breastfeeding Peer Supporter (BFPS) Service** | Volunteers All have breastfed/are breastfeeding | Pregnant and breastfeeding women Professional and self-referral | Breastfeeding 'cafés' in children's centres* and community venues | Primarily drop-in group based advice and support, plus antenatal breastfeeding classes and promotional work |
| **Make & Taste (M&T) Service** | Sessional workers (paid per session) Some existing cooking and nutrition skill | Parents with young children in low income community Some work with socially excluded adults Mixture of professional and self-referral | Children's centres* | Nutrition and cookery groups for parents and vulnerable adults 6 weekly sessions Childcare provided |
| **Slimming World (SW)** | Independent franchise holders All have been clients in the past | Overweight or obese individuals Mostly self-referral with some referred by health service using vouchers | Community venues e.g. church halls | Group based weight loss support Measuring weight, providing advice and resources, leading group |

**Government-funded centres which give help and advice on child and family health, parenting, money, training and employment, and which are open to all parents, carers and children*

**Table 2: Interviewee recruitment**

| Case study | Type of participant | Number recruited | Number available | Notes |
|---|---|---|---|---|
| **Pregnancy Outreach Worker (POW) Service** | Salaried worker | 10 | 34 | |
| | Manager | 5 | 5 | |
| | Other | 2 | N/A | 2 commissioners |
| **Breastfeeding Peer Supporter (BFPS) Service** | Volunteer worker | 10 | Total volunteer pool unknown | |
| | Manager | 2 | 2 | |
| | Other | 2 | N/A | Other stakeholder |
| **Make & Taste (M&T) Service** | Sessional worker | 4 | 3 | 1 also a manager |
| | Manager | 2 | 2 | |
| | Other | 1 | N/A | Other stakeholder |
| **Slimming World** | Self-employed worker | 3 | 7 | |
| | Manager | 2 | 2 | |
| | Other | - | N/A | |
| **Total** | Workers | 27 | | |
| | Manager | 11 | | |
| | Other | 3* | N/A | |
| **Grand total** | | 43 | | |

**One 'other' interviewee was associated with two services and thus although interviewed only once, provided information about two case studies.*

**Box 2: Proposed Taxonomy of Community Health Worker Person and Role Characteristics**

| TAXONOMY OF COMMUNITY HEALTH WORKER CHARACTERISTICS | |
|---|---|
| **PERSON CHARACTERISTICS** | **'WHO WORKERS ARE'** |
| **(1) KNOWLEDGE AND SKILLS** | |
| ***(1.1) Knowledge*** | ***What knowledge do workers possess?*** |
| Population knowledge | Local people and their lives and experiences<br>Note 'local' people may be highly heterogeneous |
| Specialist knowledge | The local area (geography, facilities etc)<br>Health (e.g. diabetes, pregnancy)<br>Social care (e.g. domestic violence, child protection)<br>Behaviour (e.g. breastfeeding, smoking) |
| Service knowledge | Local public, private and third sector service provision and access, including previous personal use of the CHW service as a client |
| ***(1.2) Skills*** | ***What skills do workers possess?*** |
| Communication | Listening, explaining etc. |
| Community language | e.g. Urdu, this could be the worker's own community language or a language they have learned later |
| Specific skills | e.g. breastfeeding, cookery |
| **(2) *PERSONAL QUALITIES*** | ***WHAT SORT OF PERSON IS SUITABLE FOR THIS ROLE?*** |
| People person | Enjoys working with people |
| Empathic and compassionate | Able to see the world from others' viewpoint<br>Caring |
| Values and attitudes | Values may influence support, e.g. if pro-breastfeeding worker may withhold information on formula feeding.<br>Need to be clear what is/is not acceptable. |
| Non-judgmental | Accepts and respects clients regardless of their characteristics or behaviour |
| Persistent | Pursues tasks in the face of barriers |
| Goes the extra mile | Willing to make additional effort to help clients, goes further than obligated to by employer (e.g. stays until job is done) |
| Appropriate disposition | Is friendly, warm, positive etc. |
| **(3) SIMILARITY TO THE CLIENT GROUP** | **DOES THE WORKER NEED TO BE SIMILAR TO CLIENTS?** |

| | |
|---|---|
| ***(3.1) Shared demographic characteristics*** | |
| Gender | Self-explanatory |
| Age | Defining a specific age range may be challenging<br>Note that individuals experience different life events at different ages |
| Locality of residence | Definitions can be administrative, or neighbourhood-based (i.e. client-defined)<br>Individuals who live in the same area may not identify as belonging to the same community |
| Socioeconomic status | May be defined along economic, educational, occupational or 'class' lines.<br>Note that these characteristics are not fixed and workers may change e.g. through social mobility |
| Ethnicity | Note that administrative definitions of ethnicity which may be broad, or may not match individuals' self-defined ethnicity.<br>Ethnic 'communities' may be diverse<br>Note that migrant and locally-born individuals may differ despite ethnic similarity |
| Religion | Note broad definitions may not account for differences within faiths, e.g. Shia and Sunni Muslims |
| ***(3.2) Shared experience*** | Note that 'experience' has many dimensions, e.g. some find breastfeeding easy while others face huge challenges<br>Note that it may be important whether or not experience is recent |
| ***(3.3) Shared non-professional status*** | The term 'lay' is not used as many CHWs have acquired knowledge and skills above lay people<br>Note that clients may still view workers as 'outsiders' from official organisations, even if they are not professionals |
| **(4) VOLUNTEER OR PAID** | **SHOULD WORKERS BE VOLUNTEERS OR PAID?**<br>Workers may be volunteers, salaried workers, paid a sessional fee, or self-employed franchise holders |
| **ROLE CHARACTERISTICS** | **'WHAT WORKERS DO'** |
| **(5) TIME AND CONTINUITY OF WORKER** | **DO CLIENTS NEED TO SEE THE SAME WORKER AT EACH CONTACT AND WHEN IS THE WORKER AVAILABLE?**<br>Contact outside of ordinary working hours may be of benefit<br>Flexible session times may be of benefit<br>Consider frequency (number of contacts), regularity (how often contacts occur), duration (how long contact sessions last), and duration of relationship (how long CHW is involved in client's life) |
| **(6) SETTINGS** | **WHERE AND WHEN IS THE SERVICE BEST PROVIDED?** |
| ***(6.1) Geographical location*** | Proximity to the client's location |

| | |
|---|---|
| ***(6.2) Physical venue*** | Clients homes, community venues, etc.<br>Venues may provide other services e.g. childcare |
| ***(6.3) Group settings*** | Group or one-to-one contact may be appropriate |
| **(7) LIMITED RESPONSIBILITY** | **DO WORKERS HAVE A DISCRETE AND WELL-DEFINED REMIT?**<br>This may contrast with professionals who are involved in the clients' care, with multiple responsibilities e.g. clinical and statutory responsibilities in addition to a social support function |
| **(8) CORE TASKS** | **WHAT IS THE SERVICE INTENDED TO DO?** |
| ***(8.1) Social Support*** | Social support, with separate domains of informational, instrumental, appraisal and emotional support for the individual client |
| ***(8.2) Clinical Care**** | Clinical tasks, e.g. observations such as blood pressure |
| ***(8.3) Service Development**** | Gathering information from clients/the community and giving feedback to improve services |
| ***(8.4) Community Development**** | Specific efforts to empower and build communities |
| ***(8.5) Research**** | Conducting research activities in the community |
| ***(8.6) Activism**** | Activism and advocacy for a community e.g. regarding health care access, or raising awareness of the plight and the needs of specific groups |
| **(9) ENACTED PHILOSOPHY (EMPOWERMENT AND CLIENT-FOCUSED CARE)** | **WHAT IS THE AIM OF THE SERVICE?**<br>Is primacy given to the client's own needs and desires rather than epidemiological or service objectives: e.g. 'to support the client to identify and achieve goals regardless of what they may be,' versus 'supporting clients to breastfeed'? |

***Core tasks found in the literature, not surfaced by the primary research**